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| 10/579,118 | 02/26/2007 | Christopher Murphy | PLATYPUS 10969 | 1358 |
| 72960 | 7590 | 06/28/2010 | | |
| Casimir Jones, S.C. 2275 DEMING WAY, SUITE 310 MIDDLETON, WI 53562 | | | EXAMINER GITOMER, RALPH J | |
| | | | ART UNIT 1657 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/579,118

Applicant(s)

MURPHY ET AL.

Examiner

Ralph Gitomer

Art Unit

1657

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 98-103 and 105-120 is/are pending in the application.
- 4a) Of the above claim(s) 106-113 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 98-103, 105 and 114-120 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB06)
Paper No(s)/Mail Date 5/27/10
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ ~~Notes of Informal Patent Application~~
- 6) ☐ Other: _____

The amendment, IDS and RCE request received 5/27/10 have been entered and claims 98-103, 105, 114-120 are considered here.

This application is a CIP of 11/342,413, please inform the examiner as to how this application differs from the parent applications to select the proper priority date. Priority is granted to 2/26/2007 at this time.

It appears the point of novelty may be found in present claim 102 directed to liquid crystal optical effects for observing cell movement in the wells where mesogen orientation is changed. All the other claimed features are conventional in this art such as pipettes to introduce precise amounts of liquids into many wells in a plate simultaneously.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 98-103, 105, 114-120 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The addition to the claims of "allowing the cells to attach in the presence of the cell seeding device" and "excluded from the remainder of the bottom surface of said at least one well due to the presence of the cell seeding device" is new matter. On page 117 of the present specification, paragraph 1, the cells are pipetted into the wells but no mention is made of other functions of the pipette.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 98-101, 103, 105, 114-117, 119-120 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Goldbard in view of Pham.

Goldbard (2008/0187949) entitled "Multiplexed Assays of Cell Migration" teaches in paragraph 20, plates with various compartments for testing cell migration with candidate cell attraction materials. In paragraphs 34-36 cell chemotaxis and invasiveness in microplate wells is shown. In paragraph 52 compounds that act on the migration of cells by promoting it or inhibiting it can be studied. In paragraph 56 the migration region may have any suitable position within a well or sub-well. The migration region may be adjacent the floor or bottom surface of the wells.

The claims differ from Goldbard in that they include a cell seeding device and masked and unmasked portions of plates and wells.

It is conventional in this art to transfer cells and apply them to wells with commercially available pipettes and such devices will not be further considered.

Pham (6,171,780) entitled "Low Fluorescence Assay Platforms and Related Methods for Drug Discovery" teaches in column 2 first full paragraph, various multiwell plate formats from 96 - >3000 wells. In column 10 first full paragraph, multiwell platform formats are discussed. In columns 13-14, the multiwell platform may have opaque portions and where the bottom of the well is not opaque, has a high transmittance and may be circular. In column 14 last paragraph bridging to column 15, the wells can include living cells of various types for cell based assays. In column 28 last full paragraph, testing for therapeutic activity and toxicology of cells is shown.

It would have been obvious to one of ordinary skill in the art at the time of the invention to perform the method of Goldbard with cells in wells with the masked and unmasked plates of Pham because Pham teaches a number of benefits of masked wells to facilitate observing selected areas without interference from other selected areas. Observing cells in portions of wells by masking portions would have been obvious in view of Pham which makes observation of selected portions easier. Observing the same cells for the same function as taught by Goldbard with any known method for its known function with the expected results would have been obvious.

Claims 102 and 118 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Goldbard in view of Pham as applied to claims 98-101, 103-105 above, and further in view of Abbott.

See the teachings of Goldbard and Pham above.

Claims 102 and 118 differ from the above references in that they include the wells orient mesogens.

Abbott (WO 99/63329) entitled "Optical Amplification of Molecular Interactions Using Liquid Crystals" (from the PCT search report submitted) teaches on page 60 under The Device, mesogenic layers are supported by a support layer which can be non-planar. On page 61 first and second paragraphs microscopic and spectroscopic techniques are discussed.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the method of Goldbard and Pham with liquid crystal technology including mesogens because Abbott teaches mesogens improve observing small changes on surfaces and have useful optical properties. Employing a known technology such as liquid crystals for its known function to improve observing small changes with the expected results would have been obvious. No unexpected result is disclosed.

Applicant's arguments filed 5/27/10 have been fully considered but they are not persuasive.

Applicants response argues that Goldbard suspends a membrane within a well over the bottom surface of the well and the cells are seeded on the membrane and not on the bottom surface of the well as claimed. Pham and Abbott do not disclose a method for confining cells to a predetermined area on the bottom surface of a well.

It is the examiner's position that applying cells to a well with a device does not lend patentability and is found in numerous references cited herein. Regarding Goldbard specifically, in paragraph 19 the wells are described that permit and restrict cell migration and passive movement of cells. See paragraph 21 which further describes the wells permitting migratory loss of cells from subcompartments and localization of cells to subregions. Pham teaches in column 3 lines 31-34, cells in multiwell plates which are assayed. Pham and Abbott were not cited to teach confining cells to a predetermined area on the bottom surface of a well.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The abstract of the disclosure is objected to because it is not directed to the current claims. Correction is required. See MPEP § 608.01(b).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ralph Gitomer whose telephone number is (571) 272-0916. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon Weber can be reached on (571) 272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ralph Gitomer/
Primary Examiner, Art Unit 1657

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Primary Examiner
Art Unit 1657

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